NRDC Comments on California Energy Commission's 2014 California Energy Demand Updated Forecast 2015-2025

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On behalf of the Natural Resources Defense Council (NRDC), we respectfully submit these comments on the California Energy Commission's (the Commission) 2014 California Energy Demand Updated Forecast for 2015-2025.

We applaud the Commission's inclusion of expected energy efficiency savings in the 2014 California Energy Demand Updated Forecast.
NRDC appreciates the opportunity to comment on the updated electricity forecast. NRDC applauds the Commission for including additional achievable energy efficiency (AAEE) in the 2014 managed forecast and for using these results for planning purposes. Historically, the forecasts have overestimated California's electricity consumption, in part because they did not include efficiency savings from programs, codes, and standards. By including AAEE savings, as done in the 2013 and 2014 forecasts, the Commission can provide more accurate forecasts of actual electricity consumption for the state's resource planning purposes.

We urge the Commission to work expeditiously with other entities to improve forecasts of local efficiency impacts, so that a reasonable amount of energy efficiency savings can be relied on in local resource planning processes as well system planning processes.
While NRDC appreciates the use of AAEE in the forecast, we recommend that this Commission work quickly with the California Independent System Operator (CAISO), the California Public Utilities Commission (CPUC), and the utilities to improve the efficiency data used, such that the most accurate levels of efficiency can be relied upon in local planning processes—instead of just conservatively estimating a lesser amount of savings. The 2014 forecast combines the mid baseline demand case with the mid AAEE scenario for system- and service territory-wide purposes, but uses the low-mid AAEE scenario for local planning purposes.

However, the low-mid AAEE scenario is just a stop gap measure until better data on local impacts can be used. Instead of continuing to rely on this conservative estimate through another demand forecast, the Commission should work toward the goal of using all reasonably expected to occur AAEE savings in local forecasts. To do this, we recommend that future forecasts include more granular data on locational (as well as temporal) impacts of efficiency.

With the 2015 forecast fast approaching, NRDC recommends that the Commission work quickly with CAISO, CPUC, and the utilities to improve locational granularity of the forecast. Greater detail of efficiency savings by location can allow the forecast to better predict the demand in

specific locations. By using more detailed data, the Commission can confidently rely on all of the reasonably expected to occur AAEE in the forecast, instead of the conservative low-mid AAEE scenario, for local procurement processes, thus improving the accuracy of the forecast.

We recommend that the Commission also work with the other relevant state bodies to improve temporal aspects of energy efficiency savings in the forecast, in order to improve renewable curtailment and flexible capacity studies.
NRDC recommends that the Commission work with its sister agencies to improve energy efficiency temporal data, like estimated aggregate daily load shapes of projected savings and peak capacity savings forecasts that vary by month and season. Energy efficiency measures save energy at different times of the day and at different times of the year. It is important to account for these variations because as more variable renewable energy resources come online, new efforts and policies will be needed to integrate them all into the grid. As more solar energy is added and the "Duck Curve" predicts a shift to an evening net peak, more information on the time of day that different energy efficiency measures save energy would allow planners to account for energy efficiency savings in the evenings that mitigate the steep evening ramp rate, and possibly adjust future portfolios of efficiency programs. Including this temporal information in the forecast will make net load curves more accurate, which brings greater confidence to procurement planning and increases the reliability of the electric system.

NRDC appreciates the work done by the Commission to produce the updated electricity forecasts and the inclusion of energy efficiency. By including more granular locational and temporal efficiency data, future forecasts can be even more accurate. Thank you for consideration of NRDC's comments.

Respectfully submitted,

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